## Amendments to the Drawings:

Please replace drawing sheets 1-4 with the attached drawings sheets 1-6.

## REMARKS

Claims 1-18 are currently pending in this application. The Examiner has rejected Claims 1-18 under 35 U.S.C. §102. The Examiner has objected to the drawings because elements in Figures 2 and 5 do not have descriptive legends. Additionally, the Examiner has objected to claims 1, 5-6, and 9 due to informalities.

The Applicants have amended the specification to correct minor typographical errors. However, the Applicants have made no substantive amendments to the specification.

The Applicants submit replacement drawing sheets 1-6 to replace existing drawing sheets 1-4 in order to address the Examiner's objections to the drawings.

The Applicants have canceled claims 5-12 and 15-18. The Applicants have amended claims 1 and 13 in accordance with the Examiner's suggestion, where applicable, and only to add clarity to the claims. No substantive amendments to the claims were made. All amendments are fully supported in the specification and no new matter has been added.

## Double Patenting – 35 U.S.C. §101

The Examiner provisionally rejected claims 5-12 and 15-18 under 35 U.S.C. §101 as claiming the same invention as that of claims 1-12 of copending Application No. 10/077565. The Applicants have canceled claims 5-12 and 15-18 in the present application, and therefore respectfully request the Examiner to withdraw the 35 U.S.C. §101 double patenting rejection in the present Application.

## Double Patenting – Obviousness-type

The Examiner rejected claims 1-18 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of various copending Applications.

The Applicants are willing to submit a terminal disclaimer to overcome the rejections over the claims of the Applications the Examiner cited, if the Examiner believes the Application is otherwise allowable.

## 35 U.S.C. §102(e) – Dabak et al.

The Examiner rejected claims 1-18 as being anticipated by Dabak et al. (U.S. Ref. No. 6,775,260). In making the rejection, the Examiner stated:

> Regarding claims 1, 5, 9, 13, 15, and 17, Dabak discloses a system called "Space time block coded transmit antenna diversity for

WCDMA". Dabak teaches the system, see figs. 1-2 and col. 4, lines 9-52, comprising:

Receiving generated data symbol S from input data 106 (generating a first data field of symbols);

The space time transmit diversity (STTD) encoder 110 encodes symbols S having complex conjugate S* (encoding said first data field producing a second data field having complex conjugates of the symbols of said data field)

The S and S* data symbols are inherently spread by using a different channelization code, since the Dabak's system is a CDMA system, wherein the S data code is associated with ANT1 112, and wherein S* data code is associated with ANT2 114 (spreading said first and second data fields, wherein said first data field is spread using a first channelization code and said second data field is spread using a second channelization code, each channelization code being uniquely associated with one of a first and second antennas).

The S and S* data symbols are transmitted by RF signals over antenna ANT1 112 and ANT2 114 respectively (transmitting an RF signal including said first and second spread data fields over a first and second antenna).

Regarding claims 2, 6, 10, 14, 16 and 18 Dabak discloses the system performs the step of scrambling the S and S* by a scrambling code $C^K$ (208, 220, 214) for S and S* data symbols. See figs. 1-2, col. 4, lines 33-40 (further comprising the step of scrambling said first and second spread data fields by a scrambling code associated with said base station).

Regarding 3, 7 and 11, Dabak discloses that the data symbol S comprises a sub-data $S_1$ and a sub-data $S_2$. See figure 1 (wherein the symbols of said first data field of symbols are grouped into a first and second sub-data field).

Regarding claims 4, 8 and 12, Dabak discloses the STTD encoder 110 encodes the sub-data $S_1$ and its complex conjugate $S_1^*$ and the sub-data $S_2$ and its negative complex conjugate $-S_2^*$. See figure 1 (wherein the symbols of said second data field of symbols are grouped into a third and fourth sub-data field, wherein said third sub-data field is the negative complex conjugate of said second sub-data field and said fourth sub-data field is the complex conjugate of said first sub-data field).

The Dabak et al. reference does not disclose, teach, nor suggest anywhere the use of different channelization codes. Indeed, in figure 2, the Dabak discloses, *inter alia*, encoded symbols $D_1^1$ and $D_2^1$ undergoing the **same** "user specific code" $C^1$. There is no teaching that any different channelization code is used on the symbols in the Dabak reference. Furthermore, there is no teaching in the Dabak reference of "each channelization code being uniquely associated with one of a first and second antennas".

Applicants' amended independent claim 1, on the other hand, recites:

> A method for a user equipment (UE) to transmit a data field of symbols comprising the steps of:
> generating a first data field of symbols;
> encoding said first data field producing a second data field having complex conjugates of the symbols of said first data field;
> spreading said first and second data fields, wherein said first data field is spread using a first channelization code and said second data field is spread using a second channelization code, each channelization code being uniquely associated with one of a first and second antennas; and
> transmitting an RF signal including said first and second spread data fields over a first and second antenna.

which is neither taught nor suggested in the Dabak et al. reference. Accordingly, the Applicants' amended independent claim 1 is patentably distinct from the Dabak et al. reference.

The Applicants' claims 2, 3, and 4 depend, either directly or indirectly, from Applicants' patentable amended independent claim 1. Therefore, Applicants'

dependent claims 2, 3, and 4 are patentable for at least the same reasons as

Applicants' patentable amended independent claim 1.

Applicants' amended independent claim 13 recites:

> A method for a user equipment (UE) to transmit a data field of symbols including a transmitter, the method comprising the steps of:
> generating a first data field of symbols;
> spreading said first data field using a first channelization code producing a first spread data field;
> spreading said first data field using a second channelization code producing a second spread data field, each channelization code being uniquely associated with one of a first and second antennas; and
> transmitting an RF signal including said first and second spread data fields over a first and second antenna.

which is neither taught nor suggested in the Dabak et al. reference.

Accordingly, the Applicants' amended independent claim 13 is patentably distinct

from the Dabak et al. reference.

Additionally, claim 14 depends from Applicants' patentable amended

independent claim 13, and is therefore patentable for at least the same reasons as

Applicants' patentable amended independent claim 13.

## Conclusion

The Applicants thank the Examiner for his consideration and believe the application is in condition for allowance. Early and favorable reconsideration is respectfully solicited.

If the Examiner has any questions, or believes that a telephone conference would advance the prosecution of this application, the Examiner is requested to contact the Applicants' undersigned attorney.

Respectfully submitted,

Kim et al.

By _____

Thomas A. Mattioli
Registration No. 56,773
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103

TAM/yil
Enclosures

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